

IDAHO DEPARTMENT OF FISH & GAME

QUARTERLY COORDINATION REPORT

DINGELL-JOHNSON PROJECTS



1 March - 31 May 1975

by

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QUARTERLY COORDINATION REPORT

(1 March – 31 May 1975)

IDAHO DEPARTMENT OF FISH AND GAME

This quarterly report is intended to satisfy the requirements under project F-67-C-1. The material that has been included was abstracted from the research biologists' monthly narrative reports and briefly summarizes the work undertaken and results for each of the projects during the quarter.

F-18-R-21 - - STATEWIDE FISHING HARVEST SURVEY

Job 1. Estimates of the 1974 Harvest of Salmon and Steelhead

There was no field operations for this job during the quarter. The annual performance report for the 1974 work was submitted during the quarter.

Job 3. Check Station Surveillance of Major Salmon and Steelhead Fisheries in Idaho

There were no field operations for this job during the quarter. The normal steelhead check station operations were not undertaken because a low run of steelhead necessitated closure of the season. A performance report for the 1974 salmon check station work was submitted during the quarter.

F-49-R-14 - - SALMON AND STEELHEAD INVESTIGATIONS

Job 1-a. Salmon Spawning Ground Surveys

Steelhead spawning ground surveys were conducted in the Clearwater River drainage during the quarter. A brief summary of activities follows.

On 26 March, we walked Pete King Creek (a lower Lochsa tributary) from its mouth to the first bridge to check for spawning steelhead and we saw no redds or spawning fish. There is still 12-15" of snow even in the lower elevations of this drainage, so steelhead have probably not moved in yet.

We spent 8 days during April checking Clearwater River tributaries, the Lochsa River and tributaries, and the lower Selway River for spawning steelhead. We checked Lolo, Five Mile, Six Mile, Post Office, Squaw, Papoose, Wendover and O'Hara creeks once each and Pete King Creek three times and have yet to see a steelhead in any of them. The only steelhead we have actually seen were nine in the Lochsa River and 10-12 in the fish tunnel at Selway Falls. Observation conditions have been good on all occasions as there has been very little runoff to date.

We spent several days during May checking Lolo, Pete King, O'Hara and Newsome creeks for steelhead spawning activity. Newsome Creek was always too turbid for good observations, and no fish were seen in Pete King or O'Hara creeks. Although no steelhead were seen spawning in Lolo Creek, we did observe them jumping at Lolo Falls on two dates. On 23 May, we saw five attempts to jump the falls in one hour, and on 30 May eight attempts in 1.5 hours. As far as could be determined, no fish made it over the falls on either date (flows were high on both occasions). It appears that the rock removal project at the falls last fall did not make it passable at high flows, but it probably is passable at lower flows.

The 1974 performance report for this job was submitted during the Quarter.

Job 2-a. Salmon and Steelhead Production and Yield Studies, Lemhi Big Springs Creek

Old man winter continued his grip on the Lemhi Valley during the entire month of March. The high temperature was 50° F. but a low of -1° F. was recorded on the 17th and a low of -8° F. on the 27th. The drum screen froze-in several times and plagued the month with continuous shut-downs and repairs. There were only 22 operable trap days with several of these only partial because of breakdowns. Cold weather also kept the downstream migration small with only 439 rainbow/steelhead caught this month. Cutthroat migration is also down considerably from the high of 2,057 in October to 103 for this month, or about 5 per trap-day.

The average size of rainbow/steelhead has increased slightly from the 84 mm reported last fall to 89 mm for this month. The average size of cutthroat has also increased slightly to 81 mm this month. There were 52 steelhead smolts (> 140 mm) caught in the trap with an average size of 189 mm. Size distribution shows little change.

Cold weather continued to be a problem in the Lemhi Valley during April. The weir froze-in solid on the 2nd of April as the temperature hit 0°. Cold weather has persisted with the lows in the teens and low twenties and the highs in the forties and low fifties. As a result, migration from Big Spring Creek has been slow. A total of 560 rainbow/steelhead, 44 cutthroat, and 34 whitefish were caught last month. Migration of cutthroat has dropped quite noticeably from last fall but the average size has increased to 91 mm. The average size of the population has also changed with 95% of the migrating population being greater than 80 mm in total length. Rainbow/steelhead size has changed but mainly as a result of the increase in migrating smolts. The average size for rainbow/steelhead was 107 mm with those fish <140 mm making up the largest percent of the catch. The average size of those fish was only 90 mm. However, the average smolt migrating from Big Spring Creek was 184 mm. Size distribution of rainbow/steelhead has changed very little from last month. Size of whitefish caught in the trap averaged 180 mm with the population divided between the size range of 110-130 mm and 200-219 mm. The average size of eastern brook was 183 mm in total length.

Vandalism was somewhat of a problem during May especially after fishing opened. The trap was pulled several times and the fish removed. Sometimes the trip gates were also let down. Cold temperatures were still prevalent at Big Spring Creek with a low of 19°. However, a few warm days did occur and the high for the month reached 79°. Water level has fluctuated widely as a result of runoff and irrigation.

Size distribution of steelhead changed little last month. However, almost every size range from 60-300 mm was represented. The largest smolt caught last month was 350 mm. The average size of steelhead smolts (<140 mm) was 187 mm. The average sub-smolt was 101 mm and the average size for all rainbow/steelhead caught was 152 mm.

The cutthroat in Big Spring Creek are growing. One measured over 140 mm in length. The average size has increased to 98 mm. Most of the fish sampled were in the size distribution of 90-119 mm, with a few in the 70-79 mm range. No cutthroat less than 70 mm were caught this month.

Job 2-b. Salmon and Steelhead Production, Yield and Escapement Studies, Lemhi River

We operated the Lemhi weir for a full month despite the trap filling with ice on several occasions. We put the adult trap in operation the 18th, and all panels were put in place at that time. No adult steelhead have been caught to date.

We measured whitefish this past month at the request of Ted Bjornn. A total of 26 juvenile whitefish and 2 adult whitefish were caught. The average length was 153 mm. Size distribution ranged from 110 to 360 mm in length. A total of 75% of the whitefish caught were in the size range of 110-139 mm.

Because of the cold weather, the number of all migrants was small this month. A total of 1,577 chinook salmon yearlings, 526 young-of-the-year chinook, 51 rainbow/steelhead and 3 cutthroat were caught in the trap.

Average length and size distribution of migrating chinook and steelhead has changed from last fall. The average length of chinook has increased to 97 mm with the highest percent of the population being in a range of 100-109 mm as compared to 90-99 mm last November. The average rainbow/steelhead caught in the trap was 199 mm in length, considerably larger than November. The average size of those fish <140 mm is 100.0 mm and those >140 mm 223.0 mm. However, there have been several large fish caught, some of which have not been in smolting condition. If those greater than 300 mm are not included, the average smolt would be 180 mm in length. The size distribution has changed in that almost all length frequencies were represented in the catch this month.

We continued the mark and recapture this month. A total of 1,407 chinook were released and 51 recaptured for a percentage of 3.6. A total of 35 rainbow/steelhead were released and 3 recaptured for a percentage of 8.6.

Migration of both chinook and steelhead continued to be slow during April as a result of the cold temperatures. A total of 545 rainbow/steelhead and 534 chinook salmon smolts were counted through the weir this month. In addition, 184 young-of-the-year chinook salmon were counted.

Adult steelhead started to come into the trap on the 21st of March. At the end of the month a total of 11 adults had come through the weir with the average size of those measured being 34 inches in total length.

Size distribution and average length of migrating chinook and steelhead has changed slightly from last month. The average length of migrating chinook has increased to 107 mm with the highest percent of the population being in the range of 110-199 mm as compared to 100-109 mm for the month of March. The average size of rainbow/steelhead caught in the trap was 199 mm. Those rainbow/steelhead <140 mm averaged 100 mm in length with the smolts (>140 mm) averaging 201 mm.

Size distribution of rainbow/steelhead has changed with the highest percent of the population being in the 200-209 mm range. There were also 17 rainbow spawners caught averaging 395 mm in total length. There were only 10 whitefish caught in the trap and a size distribution would be meaningless. The sizes range from 110 mm to 290 mm in length with the average being 223 mm.

The mark and recapture program was run the full month and a total of 431 chinook smolts and 258 steelhead smolts were released. Seven chinook smolts and 36 steelhead smolts were recaptured for a recapture percentage of 1.6 and 14.0, respectively.

Migration of both steelhead and chinook smolts has been quite erratic with no large peak being reached this month. Weather has continued to be cool and high water has not been a problem. All panels are still in the weir, and the adult trap is still working. The last adult steelhead into the trap was caught on 20 May, making a monthly total of 20 adults caught.

Many interesting or unusual observations were also noted this month. During this past month, a total of 11 adult steelhead were recaptured in the downstream juvenile trap. We also caught a jaw-tagged fish released last year, which was a precocial male. Two other jaw-tagged fish were caught and these were migrating smolts. Their condition was only fair, and they looked much like other jaw-tagged fish which we caught last fall. We also caught and released a smolt at Big Spring Creek trap which was marked very distinctly and differently. We caught this fish in the Lemhi weir trap the next day. This particular fish traveled 15-20 miles in only about 20 hours of elapsed time.

Size and distribution of chinook has changed little from last month. The average yearling chinook is 108 mm in total length and the average young-of-the-year has grown to 54 mm.

Size distribution is about the same with over 78% of the migrating fish being in a range of 100-129 mm total length. Migration of chinook was quite slow for the month with only 422 smolts being caught.

Juvenile steelhead trickled out last month with no large peak occurring. The average migrating smolt (<140 mm) was 187 mm, the same as the Big Spring Creek weir. The average sub-smolt (>140 mm) caught was 111 mm. However, there were several 130 mm migrating smolts caught last month, showing just how artificial our 140 mm cut off really is. Size distribution showed that most migrating smolts are in a range of 170-199 mm. The average size of all rainbow/steelhead caught in the trap was 185 mm. We ran the recapture program and a total of 324 chinook and 1,220 steelhead were released. Ten chinook and 118 steelhead were re-captured for a total percentage of 3.1 and 9.7, respectively.

Job 3-a. Evaluation of Pond Rearing Fish Culture Methods

The last few weeks (February and March) have seen another 2 feet of snow fall in Stanley Basin. There is now an above average amount of snow in the area. We hope this does not interfere with the installation of the salmon trapping weir again this summer.

The Decker chinook in the raceways at Hayden Creek are excellent fish. They are growing very fast and mortality to date is negligible. There is no way to predict when we will be able to deliver them to Decker. It depends on the snow.

The chinook fingerlings destined for Decker Pond continue to grow fast in the Hayden Creek South Pond. We may be delayed until late June before we can put them in the pond because of high water, and it may take a couple of extra tanker trips to move all 400,000.

The last part of May, we opened all the valves and set all the head-gates at the pond to prepare for high runoff. The potential for a flood is there; it depends on the weather.

The 1974 performance report for this job was submitted during the quarter.

Job 3-b. Evaluation of Survival of Pond Reared Chinook Salmon

No field work was conducted on this job during the quarter. The 1974 performance report for this job was submitted during the quarter.

Job 5-a. Evaluation of Survival of Hatchery Reared Salmonids

We spent considerable time during the quarter developing plans for the coming field season.

We spent some time in March preparing maps of the Selway River showing locations of rapids and campsites. These maps will be plastic-laminated and used on the Selway River steelhead-chinook-cutthroat snorkeling investigation float trip.

F-53-R-11 - - LAKE AND RESERVOIR INVESTIGATIONS

Job 2-a. Squawfish Control in Cascade Reservoir

The failure to get an experimental permit for use of squoxin will result in no squawfish eradication this year. However, we will evaluate the squawfish run size as a result of past control.

Job 2-b. Distribution, Survival and Growth of Game Fish in Cascade Reservoir

The winter segment of the Cascade fishery was investigated this winter. We still have not observed the quality fishing in Cascade Reservoir this winter compared to previous winters. The gang-up of coho in the forebay apparently has not yet materialized. We probably have only a couple more weeks of fishing before the ice becomes unsafe. At the end of the ice fishing season, we will work up an estimate of total winter pressure and catch.

The ice fishery on Cascade Reservoir drew to a close about mid-April. It seemed that fishing never was "hot".

Job 3-c. Evaluation of Fish Populations in Anderson Ranch Reservoir

and

Job 3-d. Experimental Introduction of Smallmouth Bass into Anderson Ranch Reservoir

We finished Anderson Ranch work plans during March. We spent 4 days during May on Anderson Ranch showing aides Vehlies and Neyens the area, censusing and taking plankton samples.

We started our regular creel census on 24 May. The weather was bad with very few fish being caught and few anglers on the reservoir. We caught 58 kokanee in a vertical gill net set and the age class II fish averaged 253 mm which is the same as the spawners averaged last year.

The 1974 performance report for this project was submitted during the quarter.

Job 4-a. Lake Pend Oreille Creel Census

Kokanee handlining remained good in March. Anglers were averaging over 4 fish per hour during the first part of the month. This tapered off to just a little over one fish per hour by the end of the month. There were 771 anglers checked by census personnel. They fished 3,518 hours, and caught 10,212 kokanee. This was an average of 2.9 kokanee per hour, and 13.2 kokanee per angler. There were 300 kokanee measurements taken in March. They averaged 8.8 inches in length. The size range went from 163 to 254 millimeters. Most all the fishing activity took place in Idlewild Bay. The water temperature at 6 feet below the

surface ranged from 38-40 F. Most of the fish were being caught at the 90 to 100 foot level.

The kokanee catch per hour declined some during the month of April. There were 235 anglers checked fishing for kokanee. They fished 993 hours, and captured 1,294 kokanee. This was an average of 1.3 kokanee per hour, and 5.5 kokanee per angler per day. Most all of the fish caught came from the Idlewild to Echo Bay area.

Kokanee catch per hour improved a little during May. There were 564 anglers checked that fished for kokanee. They fished 2,066 hours, and caught 3,071 kokanee. This was an average of 1.5 fish per hour, and 5.4 kokanee per angler. Kokanee averaged 9.2 inches from length measurements taken in May. Handlining provided the best kokanee fishing on the north end of Lake Pend Oreille. The best fishing seemed to be from Picard Point to Green Bay.

Cutthroat anglers found fishing very slow. Forty-two anglers fished 142 hours, and caught 2 cutthroat.

There were 68 anglers that fished for Dolly Varden. They fished 223 hours, and caught 24 char. This was an average of 9.3 hours per fish. Most of these fish were taken in the northeast portion of the lake.

Cool water temperatures greeted the Kamloop anglers in May, and the big fish were a little inactive. There were 991 anglers checked that fished. They fished 5,144 hours, and landed 53 Kamloops. It took an average of 97.1 hours to land one of these rainbows. The best fishing seemed to be near the islands at Hope towards the mouth of the Clark Fork River.

Estimated Minimum Fishing Pressure, Effort, and Harvest to
31 May 1975

Angler man-days-----	10,019	Mountain whitefish--	12
Hours fished-----	46,452	Lake whitefish-----	150
Kokanee-----	56,698	Perch-----	2
Cutthroat-----	38	Brown trout-----	13
Dolly Varden-----	196	Hybrid trout-----	6
Rainbow-----	564		

Job 4-c. Kokanee Spawning Trends

No work on this job during the quarter.

Job 4-d. Lake Pend Oreille Limnological Studies

Collection of field data continued on this job during the quarter.

Job 4-e. Lake Pend Oreille Kokanee Life History Studies

We completed our regularly scheduled echosounding transects for March, April and May. During May, the fish appeared to be distributed throughout the entire lake and were found mostly in the upper 30 feet of water. This was similar to the fish distribution last year in May.

Considerable time was spent on the extraction and storing of kokanee otoliths collected at Pend Oreille Lake in 1974. Preliminary readings of kokanee otoliths from spawners collected at Granite Creek (Lake Pend Oreille) on 17 November 1974 indicate 42% of these spawners as 3+; 48% as 4+; 8% as 5+; and 2% as 6+.

Job 11-a. Coeur d'Alene Lake Fisheries Investigations

The Biological Aide reported to work 1 April and began preparations for creel census and fish sampling. Spawning surveys were initiated on Coeur d'Alene tributaries. Fish entered streams as early as 6 April this year.

We counted approximately 20 lake-run cutthroat in Lonesome Creek, a small tributary in Wolf Lodge drainage. A debris removal project has already initiated possible degradation of fish habitat. Spawning and stream surveys in future should provide gross evaluation of imminent timber sale. We surveyed other Coeur d'Alene tributaries and found runs of adfluvial cutthroat in most.

The 1974 performance report for this job was submitted during the quarter.

Job 13-a. Palisades Reservoir Fisheries Investigations

Fishing continued poor during March with fairly heavy angling pressure compared to former years. Prepared maps and instructions for the use of Doug Honeyman who will be collecting creel data here beginning 1 May. The ice normally leaves the reservoir about 30 April but it may be late this year.

Ice fishing has pretty well ceased because of rotten ice at the latter part of the mouth. The ice cover usually dissipated in latter April but probably will hang on until mid-May this year. Doug Honeyman is to take over this census work on 1 May but will be kept busy on related work such as clipping fingerling cutthroat destined for Palisades Reservoir, mending gill nets, etc.

Palisades evacuated about 2/3 of its storage for flood control and is now refilling. The ice went off on 16 May which is the second latest date of which we have records. Usually the ice leaves in late April. Boat access is still difficult because of the low level but shoreline and boat fishing are currently heavy. Some 20,000 to 30,000 fingerling cutthroat were fin-clipped at the Jackson Hatchery for stocking in Palisades; total plant this year will be about 1/4 million.

The period of ice fishing on Palisades Reservoir during 1975 was from 14 January to 15 May. Creel census estimates during this period were 906 cars, 2,246 fishermen days, 9,257 hours, 1,675 cutthroat, and 82 brown trout. Despite using an average of 4.4 lines per fisherman, it took an average of 5 hours to catch a trout.

Job 14-a. Henrys Lake Fisheries Investigations

Fishing got off to a to a slow start at Henry Lake because of ice cover holding on until 31 May, several weeks later than normal.

Job 15-a. Little Camas Reservoir Fisheries Investigations

We checked Little Camas on three different days during March. Snow had started to melt early in the month but new storms at the end of the month put down another 1-1 ½ feet. Ice still covers the reservoir. We tentatively plan to start census on 26 April. Work plans for Little Camas are completed.

We spent 6 days during April working on Little Camas Reservoir making up tagging schedules, checking access and censusing the reservoir. The ice started going out around 21 April and fishermen started using it immediately. Anglers have averaged approximately .48 fish per hour on the first 2 census days. The trout have averaged around 320 mm in length with most of the fish being taken at the upper end where the creek runs in.

We also spent 2 days fin-clipping fingerling rainbow at Hagerman National Hatchery to be put in Little Camas the first week in May. Tim Cochnauer helped run the crew an additional 2 days to complete the adipose clipping of 75,000 trout. The fish ranged in size 60 to 95 mm with the mean length at about 75 mm.

We spent 1 day, with the aid of Conservation Officers Smith, Merrill and Teeter, jaw tagging 3,000 catchables to be planted in Little Camas the second week in May. The catchables averaged 222 mm in length.

We spent 10 days during May on the Little Camas Reservoir censusing and taking plankton samples. We interviewed 445 bank anglers during the first interval that had fished 1,602 hours to catch 395 rainbow trout for a catch rate of 0.25 per hour. Trout that appear to be wild made up 15% of the total catch. It looks like there are substantial runs of fish up Cat Creek and Little Camas Creek. I also checked 76 boat anglers that fished 229 hours to catch 26 trout for a catch rate of 0.11 fish per hour. Weather kept boat anglers to a minimum during the interval.

Job 16-a. Roseworth Reservoir Fisheries Investigations

With the continued high levels of precipitation, Roseworth Reservoir has filled to within 10 feet of maximum capacity from the low water levels noted during the January-February ice fishing season. The reservoir is quite turbid (Secchi Disc reading less than 1 foot); and well mixed by the winds with uniform dissolved oxygen levels of 10-11 ppm and water temperatures about 5 C.

To monitor creel returns of spring planted rainbow from Roseworth we tagged 1,300 catchables at Twin Falls Hatchery and fin-clipped 25,000 of a total of about 50,000 rainbow fingerlings planted by the Hayspur Hatchery.

We set gill nets at Roseworth late in April using the same nets and mesh sizes used at Salmon Falls Creek Reservoir. We set the vertical gill nets for one night near the damsite at the only site we found sufficiently deep for verticals (60 ft.) and set the two horizontal nets a night each at two other sites. We caught the following game fish and rough fish species listed in order of abundance: Game fish - - rainbow trout, cutthroat trout, brook trout. Rough fish - - redbside shiner, mountain sucker. The rough fish species proved to be much more abundant in all net samples taken. Both rough fish species in Roseworth are infested with a parasitic worm as yet unidentified by us, but none of the game fish were infested. One of the brook trout captured was 16 inches in length and weighed almost 2 ½ pounds.

Our future plans for Roseworth include initiation of a creel census on 24 May, continuation of monthly gill netting, plankton sampling beginning in May, and electrofishing as time permits.

With the opening of the general fishing season we began a creel Census of Roseworth angling consisting of random aerial counts and catch Interviews of anglers fishing the reservoir. Along with our catch interviews we sampled angler opinions for Roseworth. Opening day saw about 55 vehicles and a dozen boats at the reservoir, but by 8 a.m. wind conditions forced all but a few anglers to quit fishing. Continued windy and cold weather through the end of May reduced both participation and catch at Roseworth. Along with adverse weather conditions the reservoir became very high and turbid as runoff peaked late in May.

Plankton sampling at Roseworth revealed mostly *Daphnia* widely scattered in the reservoir with no water stratification yet evident.

Job 17-a. Salmon Falls Creek Reservoir Fisheries Investigations

Salmon Falls Creek Reservoir is located in a high desert-sagebrush area at 5,000 feet elevation about 40 miles southwest of Twin Falls. The reservoir stretches about 10 miles in length in a north-south direction with its width varying from ¼ to ½ mile. The reservoir fills a relatively flat-bottomed narrow canyon bordered mostly by steep basalt bluffs. Depth varies fairly constantly from less than 10 feet at the silted southern inlet area to 150-180 feet at the dam. Access to the east side of Salmon Falls Creek Reservoir is by good gravel roads from highway 93 to four undeveloped access sites and by paved highway through Rogerson to a developed BLM Campground and boat ramp at the damsite. Access to the west side of the reservoir is possible to many undeveloped points on the reservoir by jeep roads.

The water source for the reservoir is Salmon Falls Creek; a stream having the majority of its watershed in an area of northern Nevada which consists of high sagebrush covered mountains and high valleys. The

major agricultural activities in the watershed are livestock ranching and hay growing with much of the undeveloped land used for grazing livestock.

We began tagging catchable sized rainbow at Twin Falls Hatchery during March for planting in Salmon Falls Creek Reservoir. During two afternoon tagging sessions we tagged 2,600 catchables using No. 8 jaw tags. We measured 800 of the tagged fish for a base length determination. Rex Spackman planted 1,300 of the tagged catchables on 20 March at Greys Landing, a popular access site about halfway up the reservoir; and planted an additional 1,300 on 21 March at the dam-site. We plan to tag another 1,300 catchables for planting at the upper end of the reservoir early in April. We were able to publicize our tagging with the help of Stu Murrell's Region 4 news release.

We plan to begin our creel census on Salmon Falls Creek Reservoir during the second week of April and to start gill netting and electro-fishing about the same time.

During April water entering the reservoir from Salmon Falls Creek was very turbid giving Secchi Disc reading of less than one foot at the inlet to four to six feet near the dam. Water temperatures and dissolved oxygen levels were very constant at all depths and locations on the reservoir in April with dissolved oxygen levels near saturation. The extremely windy conditions on the reservoir since ice breakup probably caused the constant readings. Water temperatures remained in the low 40's F. (about 5 C) during the month of April. Dissolved oxygen remained at about 10-12 ppm.

Beginning in April we ran a creel census on Salmon Falls a possible on four randomly selected weekdays and weekend days of each 28-day interval. For census purposes, we divided the reservoir into three sections: Section I covering approximately the lower third of the reservoir with depths from 70 to 160 feet and mostly steep rocky shoreline; Section II the middle third of the reservoir varying in depth from about 30 to 70 feet in depth with a shoreline of sand-beached bays between steep basalt outcroppings; Section III covering the upper third of the reservoir from less than 10 to 30 feet in depth and sandy beach/steep basalt shoreline. We made creel census counts and interviews from a boat because of the long road distances between the numerous access points. Our census reveals a good angler turnout for spring trout fishing with bank angler counts above 100 and over 50 boats on the reservoir on one of the few pleasant sunny days. Counts were smaller on the more numerous snowy, windy days, but at least a few anglers fished on every census day. Generally, most of the boat anglers fished Section I, the lower reservoir section - - probably because the only boat launch on the reservoir is at the dam. Also the cool weather may have discouraged longer boat trips to the middle and upper reservoir sections. Section II, the middle section, sustained the greatest bank fishing effort probably because it has the most access points and sandy beaches which make bank fishing easier. Section III, the upper section, having only one good shore access point and being far from the boat ramp had little fishing pressure from either

bank or boat anglers. Section III also remained very turbid through April.

Although we have not yet summarized the information collected during our first creel census interval, catch rates generally seemed fairly constant at something less than one fish per hour for all three sections of the reservoir for both bank and boat anglers. The catch included primarily rainbow trout with a few kokanee, brown trout, yellow perch, and largescale suckers noted. The rainbow ranged in length from about 8 to 21 inches with over 90% from 12 to 14 inches in length. Almost 100% of the rainbow trout checked showed fin deformities indicating hatchery origin. Body condition of the rainbow checked was very good with fish 14 inches in length weighing about one pound. Most of the rainbow had pink colored flesh - a trait desirable to the anglers interviewed.

Most of the anglers interviewed live in the Magic Valley area and rated the fishing at Salmon Falls Creek Reservoir good. Most bank fishermen interviewed used bait while the boat anglers preferred lure fishing.

To evaluate returns of spring planted rainbow catchables to the creel at Salmon Falls Creek Reservoir we jaw tagged 3,900 rainbow; 1/3 of which were planted at a good access site in each of the three census sections in late March or early April from the Twin Falls Hatchery. To date less than ten tags have been returned by anglers or checked in the creel in spite of a good publicity program by Stu Murrell and fairly intensive creel census efforts on the reservoir. Thus far it seems that spring plants of catchable rainbow in this reservoir do not contribute much to fishing immediately after the plantings, but later tag returns may show a contribution to the creel at a later date. We plan to attempt to evaluate summer and fall plants of catchables in a similar manner and to fin-clip fingerlings planted at the reservoir this summer.

We completed the first of our monthly scheduled gill net sets on Salmon Falls Creek Reservoir about the middle of April. We made one overnight set at a selected site in each of the three reservoir sections using six 100 foot vertical gill nets ranging in stretch mesh size from 1 inch to 4 inches, and two horizontal gill nets (one floater and one sinker) with stretch mesh size graduated from 1 inch to 4 inches. Since maximum depth at the Section III net site is only 12 feet, we set only the horizontal nets at that site. We caught the following game fish and rough fish species listed in order of abundance in our overnight gill net sets: game fish - yellow perch, rainbow trout, black crappie, kokanee, brown trout; rough fish - largescale sucker, mountain sucker, chiselmouth, redbreast shiner, and squawfish. We caught no walleyes in our first gill netting series. Generally we caught more of all species except kokanee in the Section III horizontal net shallow water sets than any other sets.

Kokanee were more abundant in Section I, which has the deepest water and lowest turbidity. Yellow perch and largescale sucker were by far the most abundant of the species captured.

Out future plans for Salmon Falls Creek Reservoir include continuation of monthly gill net sets, continued creel census with aircraft counts beginning 24 May and continued monitoring of plankton sampling and electrofishing in May.

No major changes in angler use and catch or gill net catch occurred on Salmon Falls Creek Reservoir this month over April. Angling pressure on Salmon Falls Creek Reservoir did not drop with the opening of the general fishing season probably because of the poor water conditions at other popular fishing areas. By the end of May, turbid water conditions on the upper two-thirds of the reservoir concentrated most of the angler use on the lower third of the reservoir near the dam. Cool and windy weather for most of May retarded water stratification keeping plankton relatively evenly dispersed from surface to bottom. Daphnia were the only plankton sampled of any direct significance as fish food. We found Daphnia at all three sampling sites at most depths.

The water level at Salmon Falls Creek Reservoir continued to rise producing a near-record pool level by the end of May.

We completed three overnight sets of gill nets on Salmon Reservoir composed of six vertical nets and two horizontal experimental nets. The most abundant species in our net sets at the mouth of Whiskey Slough (near the dam) were rainbow trout, perch, redbreasted shiners and largescale suckers. We also captured two coho and one kokanee at this station. This shoreline abruptly drops to greater than 100 feet, and in our 125 foot long horizontal floater we captured 39 rainbow trout. But in our horizontal sinker, we captured no trout but more suckers.

At Gray's Landing, about half way up the reservoir, we captured the same species but more perch and three kokanee as opposed to one at Whiskey. Trout numbers were about the same. At China Creek near the inlet to the reservoir, in addition to the aforementioned species, we captured black crappie, Utah chubs, and one smallmouth bass. Rainbow trout captures were much less than down reservoir. We also captured one kokanee and one coho in this area.

F-59-R-7—EVALUATION OF ANGLING REGULATIONS IN MANAGEMENT OF CUTTHROAT TROUT

No field work on this job during the quarter.

F-60-R-7 – ST. JOE RIVER CUTTHROAT AND SQUAWFISH INVESTIGATIONS

Job 1. Life History of St. Joe River Cutthroat Trout

Job 2. Squawfish Studies - - St. Joe River

Job 3. Evaluation of Squawfish Control Program and Survival of Hatchery Releases

No field work on these jobs during the quarter but there was considerable work planning during the quarter. The failure to receive an experimental permit for squoxin use will necessitate evaluation of the squawfish run in relation to past treatments.

F-63-R-5 – SNAKE RIVER FISHERIES INVESTIGATIONS

Job 3-a. Survey of Angler Use and Harvest in the Snake River from the C. J. Strike Flowline Upstream to Bliss Dam

We began recreational use and harvest estimates on the Snake River from Loveridge Bridge upstream to lower Salmon Falls Dam. Counts were taken on 4 randomly picked weekdays and 4 weekend days during a 28-day interval. We took counts four times a day as determined by cluster sampling.

Aerial counts on the Snake River indicate fishing pressure only on the weekends during April, and then only one or two people are fishing for a few hours each day. This near zero pressure might be expected as our study section of the river was high and muddy, and the weather was miserable during April. Because of almost no fishing use on the river this month, we can make no estimate of harvest.

Mid-May marked the completion of the first interval of our use survey on the Snake River and Salmon Falls Creek Reservoir. We set the surveys up on the same type of census that Reid initiated on the Snake River. It consists of intervals of 28 days in which we census 50% of the weekend days and holidays, and 20% of weekdays. We made four counts each day as determined by cluster sampling.

During the first interval, we were flying the counts on the Snake River from Loveridge Bridge at Strike to lower Salmon Falls Dam. Steve was counting by boat on Salmon Reservoir.

Water recreationists expended few hours this interval on the study section of the Snake River. However, that section from Loveridge to Bliss Dam received a greater amount of total hours of pressure than did the section from Bliss to lower Salmon Falls Dam.

	<u>Loveridge to Bliss Dam</u>	<u>Bliss Dam to lower Salmon Falls Dam</u>
Bank Anglers	924	616
Boat Anglers	72	0
Bank Others	1,225	156
Boat Others	98	54

We viewed no boat anglers in the section above Bliss Dam.

We broke that area from Loveridge to Bliss into the following sections: Loveridge Bridge to Indian Cove Bridge (near Hammett), Indian Cove to beginning of canyon upstream from King Hill, and from the canyon mouth to Bliss Dam. These sections received the following percentage of use from anglers and non-anglers.

	<u>Loveridge to Indian Cove</u>	<u>Indian Cove to Canyon</u>	<u>Canyon to Bliss Dam</u>
Bank Anglers	30.6%	38.8%	30.6%
Boat Anglers	40.0%	60.0%	0.0
Bank Others	47.4%	19.5%	33.1%
Boat Others	51.8%	48.2%	0.0

The canyon below Bliss Dam received no boat use probably because the river was high and this section was very treacherous. There almost 100% of the bank angles were fishing for sturgeon. We checked no one that had caught sturgeon the days that we interviewed. Bank others in the canyon section and the section above Loveridge Bridge were principally artifact hunters. The section from Indian Cover Bridge to the beginning of the canyon received the greatest amount of pressure from boat and bank anglers of the three sections. This section is of flat farmland with gradual river gradient and abundant access areas.

F-66-C-1 – RIVER AND STREAM INVESTIGATIONS

Job 1. Moyie River Fisheries Investigations

Program planning was the only activity for this job during the quarter.

Job 2. Selway River Fisheries Investigations

We prepared work plans for this job for the year. This included development of a census form and setting up of a census schedule to assess cutthroat harvest. We also discussed the cutthroat tagging and creel census study on the Selway River with Regional Fishery Manager Wes Cannon.

Job 3. Silver Creek Fisheries Investigations

We spent considerable time reviewing Silver Creek history and prepared questions for this year's Silver Creek survey. We met with regional personnel in setting up the questionnaire and the procedures for this survey.

We began angler interviewing on Silver Creek with the opening of the general fishing season. Lee Frost, Conservation Officer at Hailey, is conducting the interviews which sample angler opinions and record catches. Along with the interviews we began jaw tagging at least 1,500 rainbow catchables each week for planting in Silver Creek and Loving Creek.

Our goals for Silver Creek this year are to get a rough idea of angler opinions and to tag all catchables planted in the Silver Creek drainage.

F-67-C-1 – FISHERY RESEARCH SUPERVISION

The Fishery Research Supervisor spent the first quarter supervising the eight Dingell-Johnson projects with their 31 separate jobs. Considerable time was spent preparing annual performance reports for printing. Field program planning and supervision also required considerable time.